

CLAIMS:

[1] An inorganic-organic composite flame retardant composition comprising an inorganic hydroxide having a polymer layer, and an organic resin;

which is characterized in that the polymer layer is formed by graft polymerization and has an average thickness of at least 3 nm.

[2] The inorganic-organic composite flame retardant composition of claim 1 which is characterized by having a percent weight loss, when acid-treated by 5 minutes of immersion in an aqueous solution containing 20 wt% of hydrogen chloride, which satisfies the following relationship with respect to the percent weight loss, when similarly acid treated, by an untreated inorganic hydroxide-containing composition that includes, instead of the inorganic hydroxide in said inorganic-organic composite flame retardant composition, a like amount (inorganic hydroxide basis) of an inorganic hydroxide lacking a polymer layer:

$$\frac{(\text{percent weight loss of inorganic-organic composite flame retardant composition})}{(\text{percent weight loss of untreated inorganic hydroxide-containing composition})} < 0.50.$$

[3] The inorganic-organic composite flame retardant composition of claim 1 which is characterized by having a dielectric constant which satisfies the following relationship with respect to the dielectric constant of an untreated inorganic hydroxide-containing composition that includes, instead of the inorganic hydroxide in said inorganic-organic composite flame retardant composition, a like amount (inorganic hydroxide basis) of an inorganic hydroxide lacking a polymer layer:

$$\frac{(\text{dielectric constant of inorganic-organic composite flame retardant composition})}{(\text{dielectric constant of untreated inorganic hydroxide-containing composition})} < 1.00.$$

[4] The inorganic-organic composite flame retardant composition of claim 1 which is characterized by having an elastic modulus which satisfies the following relationship with respect to the elastic modulus of an untreated inorganic hydroxide-containing composition that includes, instead of the inorganic hydroxide in said inorganic-organic composite flame retardant composition, a like amount (inorganic hydroxide basis) of an inorganic hydroxide lacking a polymer layer:

10 (elastic modulus of inorganic-organic composite flame retardant composition)/(elastic modulus of untreated inorganic hydroxide-containing composition) > 1.10.

[5] The inorganic-organic composite flame retardant composition of any one of claims 1 to 4, which is characterized in that the inorganic hydroxide is in the form of particles having an average particle size of 1 nm to 100 μm .

20 [6] The inorganic-organic composite flame retardant composition of any one of claims 1 to 5, which is characterized in that the inorganic hydroxide is one or more selected from the group consisting of aluminum hydroxide, magnesium hydroxide, potassium hydroxide and calcium hydroxide.

[7] The inorganic-organic composite flame retardant composition of any one of claims 1 to 6, which is characterized in that the inorganic hydroxide is magnesium hydroxide and/or aluminum hydroxide, and the polymer layer is a layer composed of a styrene resin and/or an olefin resin.